

What Is Claimed Is:

1. A computer system having a virtualized I/O device,  
comprising:

a client computer having a first hypervisor and a first  
5 OS operating on the first hypervisor; and

a server computer having a second hypervisor, a second  
OS operating on the second hypervisor, and a physical I/O device,  
wherein

said client computer and said server computer are connected  
10 via a network,

said first hypervisor comprises:

logical I/O device access detecting means for detecting  
a logical I/O device access, which is directed to said physical  
I/O device of said server computer; and

15 virtual I/O client processing for transmitting to said  
server computer, via said network, a command to access said  
logical I/O device when said logical I/O device access is  
detected; and

said second hypervisor comprises virtual I/O server  
20 processing for receiving said command via said network and for  
issuing a command to said physical I/O device.

2. The computer system having a virtualized I/O device  
according to claim 1, wherein communication between said client  
25 computer and said server computer is performed on a protocol,

which is determined by said first and second hypervisors.

3. The computer system having a virtualized I/O device according to claim 1, wherein communication between said client  
5 computer and said server computer is performed on a protocol of said second OS, which operates on said server computer.

4. The computer system having a virtualized I/O device according to claim 1, wherein said virtualized I/O client  
10 processing transmits to said server computer said command to access said logical I/O device, after converting said command into a protocol, which the second OS of said server computer is capable of interpreting.

15 5. The computer system having a virtualized I/O device according to claim 1, wherein said client computer has a memory protection control function and further has means for detecting a read command and a write command to said logical I/O device by use of said memory protection control function, and for passing  
20 control to said first hypervisor.

6. The computer system having a virtualized I/O device according to claim 5, further comprising means such that, in said client computer, upon reading/writing from/to a particular  
25 memory address, a memory protection interrupt occurs, and when

a cause of said memory protection interrupt is either a read command issuance or a write command issuance to said logical I/O device, said virtual I/O client processing is called.

5           7. The computer system having a virtualized I/O device according to claim 6, wherein said first OS has means for searching a device driver corresponding to an I/O device which stores a file designated by an application program, and calling the device driver thus found as a result of the searching, and said device  
10 driver issues a read command and writes said read command in a memory address of the logical I/O device.

8. A computer system having a virtualized I/O device according to claim 1, wherein

15           said virtual I/O client processing comprises:

          means for determining whether data written in a memory address for controlling an I/O device is a read command or a write command;

          means for, when the data is a read command, transmitting  
20 to said server computer the read command and a parameter of the read command;

          means for receiving data read out in I/O read processing by said server computer;

          means for, when the data is a write command, transmitting  
25 to said server computer the write command and a parameter of

the write command; and

means for transmitting data to be written to said server  
computer.